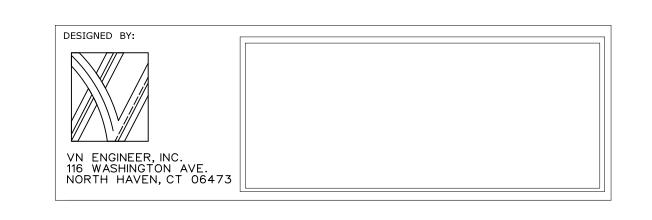
06 - SITE ILLUMINATION

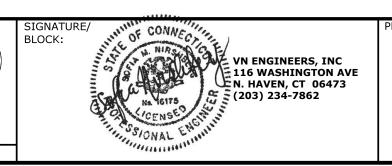
INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE	
SLI-001	DRAWING INDEX	
SIL-001	ILLUMINATION NOTES	
SIL-002	SITE ILLUMINATION PLAN	
SIL-003	ILLUMINATION DETAILS	
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 2/4/2014]

MD/MB	CONNECTICAL
RG	STATE OF CONNECTICUT
	DEPARTMENT OF TRANSPORTATION



NEW HAVEN - HARTFORD SPRINGFIELD RAIL CORRIDOR

OWN:	MERID	EN
DRAWING	TITLE:	
	DRAWING	INDEX

170-3155
DRAWING NO.
SLI-001
SHEET NO.
03.06.001

Filename: ...\FA_CGR_CPS_0170-2296_079__06_SLI__001.dgn

GENERAL ELECTRICAL NOTES

1. GENERAL: UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON ELECTRICAL DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.

2. COORDINATION: COORDINATE AND COOPERATE WITH ALL TRADES ON THE PROJECT. THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS INCLUDING CIVIL, STRUCTURAL, ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL COORDINATE AND ADJUST ACCORDINGLY AS DIRECTED BY THE ENGINEER.

3. RECORD DRAWINGS: SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. THESE MARKED DRAWINGS SHALL REFLECT ANY AND ALL CHANGES AND REVISIONS TO THE ORIGINAL DESIGN WHICH EXISTS IN THE COMPLETED WORK. DELIVER THE MARKED DRAWINGS TO THE ENGINEER AT PROJECT CLOSE-OUT.

4. TESTS: TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. PERFORM INSULATION RESISTANCE TESTS ON ALL WIRING TO INSURE THAT ALL PORTIONS ARE FREE FROM SHORT-CIRCUITS AND GROUNDS.

5. INSPECTIONS: ARRANGE ALL NECESSARY INSPECTIONS. DELIVER ALL REQUIRED INSPECTION CERTIFICATES TO THE OWNER.

6. ELECTRICAL SERVICE: PROVIDE THE ELECTRICAL SERVICE. COMMUNICATE WITH THE LOCAL POWER COMPANY, VERIFY ALL REQUIREMENTS, AND COORDINATE ALL EFFORTS.

7. GROUNDING: PROVIDE GROUNDING IN ACCORDANCE WITH THE NEC FOR THE ENTIRE ELECTRICAL SYSTEM INCLUDING EQUIPMENT FRAMES CONDUITS, SWITCHES, CONTROLLERS, WIRE-WAYS, NEUTRAL CONDUCTORS, AND OTHER EQUIPMENT. PROVIDE A GROUNDING CONDUCTOR IN ALL POWER CONDUITS.

8. J-BOX LABELING: LABEL ALL JUNCTION BOXES WITH PERMANENT MARKER IDENTIFYING CIRCUIT NUMBER AND PANELBOARD OF CIRCUITS WITHIN.

9. CONDUCTORS: IN SITUATIONS WHERE CONDUCTOR SIZES AND/OR QUANTITIES OF PARALLEL SETS HAVE BEEN INCREASED DUE TO VOLTAGE DROP OR FOR OTHER REASONS, CONTRACTOR SHALL PROVIDE THE APPROPRIATE LUG SIZES/QUANTITIES WITHIN THE EQUIPMENT CONNECTED (PANELBOARD, ETC.) TO PERMIT SATISFACTORY CONNECTION OF THE INDICATED CONDUCTORS, WHERE SUFFICIENT LUG SIZES AND/OR QUANTITIES CANNOT BE PROVIDED TO ACCOMMODATE THE CONDUCTORS INDICATED, THEN PROVIDE REDUCING ADAPTERS, PIN TERMINALS, OR A JUNCTION BOX TO SPLICE LARGER CONDUCTORS TO APPROPRIATELY SIZED SMALLER CONDUCTORS TO FIT INTO THE LUGS PROVIDED, ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NEC. CONDUCTOR TYPE: XHHW RATED FOR 600 VOLT CIRCUITS

10. CONNECTION DETAILS: SECURE APPROVED SHOP DRAWINGS SHOWING WIRING DIAGRAMS, ROUGH-IN AND HOOK UP DETAILS FROM OTHER INVOLVED TRADES FOR EQUIPMENT WHICH MUST BE CONNECTED ELECTRICALLY.

CONDUIT NOTE

ALL CONDUITS SHALL BE CONCEALED FROM VIEW. CONDUITS SHALL BE ROUTED UNDER SLAB WHERE NECESSARY IN AREAS WHERE WINDOWS OBSTRUCT CONDUIT PATHS.

REVISION DESCRIPTION

11. COORDINATION DETAILS: MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE MECHANICAL TRADE. THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE. COORDINATE WITH THE MECHANICAL INSTALLER TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT AND DETERMINE THE EXACT ROUGH-IN AND CONNECTION REQUIREMENTS.

12. WORKING CLEARANCE: COORDINATE FINAL LOCATIONS OF ELECTRICAL EQUIPMENT WITH MECHANICAL DUCTWORK, PIPING ETC. AND ASSURE WORKING CLEARANCE REQUIRED BY NEC WILL BE MET. SUFFICIENT ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL COORDINATE FINAL LOCATION OF EQUIPMENT PROVIDED AND INSTALLED BY OTHER TRADES.

13. MOUNTING HEIGHTS: MOUNTING HEIGHTS INDICATED ARE FROM THE FINISHED GRADE TO THE CENTERLINE OF THE WIRING DEVICE UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS OF LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURE UNLESS OTHERWISE NOTED.

14. CLEAN UP: ON PROJECT CLOSE-OUT CLEAN ALL ELECTRICAL DEVICES, LIGHTING FIXTURES, LAMPS AND LENSES, AND REMOVE ALL PAINT SPATTERS FROM DEVICES, FIXTURES AND PLATES. REPLACE ALL INOPERATIVE LAMPS.

15. THE CONTRACTOR TO CONTACT CONNECTICUT LIGHT AND POWER REPRESENTATIVE BILL BONGIORNO AT 860-280-2523 TO COORDINATE LIGHTING WORK ON CITY STREETS.

16. THE CITY OF MERIDEN TO OWN, MAINTAIN AND PAY FOR THE ENERGY COSTS OF LIGHTS ON CITY STREETS.

17. THE CONTRACTOR IS TO COORDINATE LIGHT POLE INSTALLATION WITH VIDEO CAMERA INSTALLATIONS.

ELECTRICAL LEGEND

LIGHTING

AREA SITE LIGHTING FIXTURE LIGHTING FIXTURE TO BE REMOVED/ RELOCATED BY UTILITY

LIGHTING FIXTURE TO BE RELOCATED BY UTILITY COMPANY

LIGHTING FIXTURE TO REMAIN

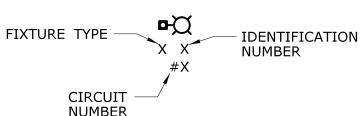
CONCRETE HANDHOLE TYPE I

LIGHTED BOLLARD LIGHTED COLUMN

POWER

ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED). AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #10 PHASE CONDUCTOR, 1 #10 NEUTRAL CONDUCTOR AND 1 #10 GROUNDING CONDUCTOR IN 1-1/2" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE NEUTRAL CONDUCTOR TO ALL WALL SWITCH OUTLET BOXES WHETHER REQUIRED OR NOT. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS MAY BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTOR'S DISCRETION. GROUNDING CONDUCTORS MAY BE SHARED AS ALLOWED BY THE NEC. NEUTRAL CONDUCTORS SHALL NOT BE SHARED. MULTI-POLE BREAKERS SHALL BE PROVIDED IN ACCORDANCE WITH THE NEC SHOULD MULTI-WIRE BRANCH CIRCUITS BE INSTALLED. CONDUIT LARGER THAN 1/2" AND CONDUCTORS LARGER THAN #10 SHALL BE AS INDICATED.

TYPICAL ILLUMINATION UNIT



/ *^	EC	EMPTY CONDUIT
	ETR	EXISTING TO REMAIN
	FOC	FACE OF CURB
	FOF	FACE OF FOUNDATION
	GFI	GROUND FAULT INTERRUPTER
	GND	GROUND
	HID	HIGH INTENSITY DISCHARGE
	KVA	KILO-VOLT-AMPERES
	KW	KILO-WATTS
	LTG	LIGHTING
	MTD	MOUNTED
	NEC	NATIONAL ELECTRICAL CODE
	NTS	NOT TO SCALE
	OC	ON CENTER
	Р	POLE
	PF	POWER FACTOR
	Ø	PHASE
	TYP	TYPICAL
	UON	UNLESS OTHERWISE NOTED
	W	WATTS/WIRE
	WP	WEATHERPROOF

ABBREVIATIONS

CONDUIT

AFG ABOVE FINISHED GRADE

BELOW FINISHED GRADE

BOTTOM OF FIXTURE

AUDIO VISUAL

	LIGHT	FIXTU	RE SCH	EDULI	E
TYPE	MANUFACTURER (OR APPROVED EQUAL)	VOLTAGE	CONDUCTOR TYPE	LAMPS	FIXTURE DESCRIPTION
A	LUMEC DOS-40W30LED4K-ES-LE4F-277-DBG-1A-COLTX POLE: SM63V-13.5 MOUNTING: DBG-1A COORDINATE CUSTOM FINISH W/ARCH	277	XHHW, 600V	(1) 45W LED 4,000° K	WALKWAY FIXTURE, POLE MOUNTED W/B.O.F. @14FT AFG. ALUMINUM HOUSING, SEALED TEMPERED GLASS LENS. STEEL POLE MOUNTED ON CONCRETE FOUNDATION 2FT ABOVE GRADE.
В	LUMEC DMS50-80W48LED4K-R-LE4F-277-PC-1A-COLTX POLE: SM8V-20 MOUNTING: PS-1A COORDINATE CUSTOM FINISH W/ARCH	277	XHHW, 600V	(1) 79W LED 4,000° K	PARKING LOT FIXTURE, POLE MOUNTED W/B.O.F. @20FT AFG. ALUMINUM HOUSING, SEALED TEMPERED GLASS LENS. STEEL POLE MOUNTED ON CONCRETE FOUNDATION 2FT ABOVE GRADE.
С	LUMEC DMS50-80W48LED4K-R-LE4F-277-PC-2-COLTX POLE: SM8V-20 MOUNTING: PS-2A COORDINATE CUSTOM FINISH W/ARCH	277	XHHW, 600V	(2) 79W LED 4,000° K	PARKING LOT FIXTURE, POLE MOUNTED BACK-TO-BACK W/B.O.F. @20FT AFG. ALUMINUM HOUSING, SEALED TEMPERED GLASS LENS. STEEL POLE MOUNTED ON CONCRETE FOUNDATION 2FT ABOVE GRADE.
D	LUMEC - DOS B1 LIGHTED BOLLARD DOSB1-30W16LED4K-277-VPA-COLTX OR APPROVED EQUAL COORDINATE CUSTOM FINISH W/ARCH	277	XHHW, 600V	(1) 30W LED 4,000° K	SITE LIGHTING BOLLARD. DIE CAST ALUMINUM CONSTRUCTION, TAMPER RESISTANT HARDWARE. FULL CUT-OFF OPTICAL SYSTEM. CUSTOM PAINTED TO MATCH EXTERIOR WALL SCONCE.
E	FORMS & SURFACES LIGHT COLUMN SERIES 600 OR APPROVED EQUAL COORDINATE CUSTOM FINISH W/ARCH	277	XHHW, 600V	(4) 28W LED 4,000° K	WALKWAY LIGHT COLUMN, W/B.O.F. @7'-3" AFG.

REFER TO THE ELECTRICAL SPECIFICATION FOR ADDITIONAL GENERAL REQUIREMENTS.

2. FIXTURES SHALL BE UL OR ETL LISTED

3. MOUNTING HARDWARE SUCH AS HANGERS, BRACKETS, RAILS, YOKES, STEMS, CHAINS, ECT., SHALL BE PROVIDED AS NECESSARY TO MOUNT SPECIFIED FIXTURE.

4. FIXTURES SHALL BE SEISMICALLY SUPPORTED AS REQUIRED BY THE APPLICABLE BUILDING CODE.

Filename: FA CON PDM 0170-2296 007 04 CIV STAGE PLN-001 dgr

5. FIXTURE TYPES B AND C SHALL BE RATED TO HAVE A MAXIMUM OF THREE SECURITY CAMERAS EACH MOUNTED TO THE FIXTURE POLE IN THE FILED WITH A DEFLECTION RATING OF LESS THAN

POWER DENSITY STATISTICS							
NAME	#LUMINARES	TOTAL WATTS	AREA	DENSITY			
BUS DROP OFF POWER DENSITY ZONE	12	1503.2 W	26730.0 SQFT	0.1 W/SQFT			
NORTH PARKING POWER DENSITY ZONE	12	1603.4 W	31063.2 SQFT	0.1 W/SQFT			

STATISTICS					
DESCRIPTION	AVG	MAX	MIN	MAX/MIN	AVG/MIN
BUS AREA	1.2fc	3.3fc	0.6fc	5.5:1	2.0:1
PARKING AREA	1.9fc	5.6fc	0.9fc	6.2:1	2.1:1
SIDEWALK	2.4fc	5.0fc	0.5fc	10.0:1	4.8:1
SIDEWALK/WAITING AREA	1.7fc	5.7fc	0.3fc	19.0:1	5.7:1
STATE STREET	1.3fc	3.8fc	0.3fc	12.7:1	4.3:1
WALK TO E. MAIN	0.8fc	1.6fc	0.3fc	5.3:1	2.7:1
WALKWAY	3.1fc	14.6fc	0.3fc	48.7:1	10.3:1
WALKWAY #2	1.5fc	5.9fc	0.3fc	19.7:1	5.0:1

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SHEET NO. Plotted Date: 2/4/2014

MD/MB

SCALE AS NOTED





NEW HAVEN - HARTFORD SPRINGFIELD RAIL CORRIDOR

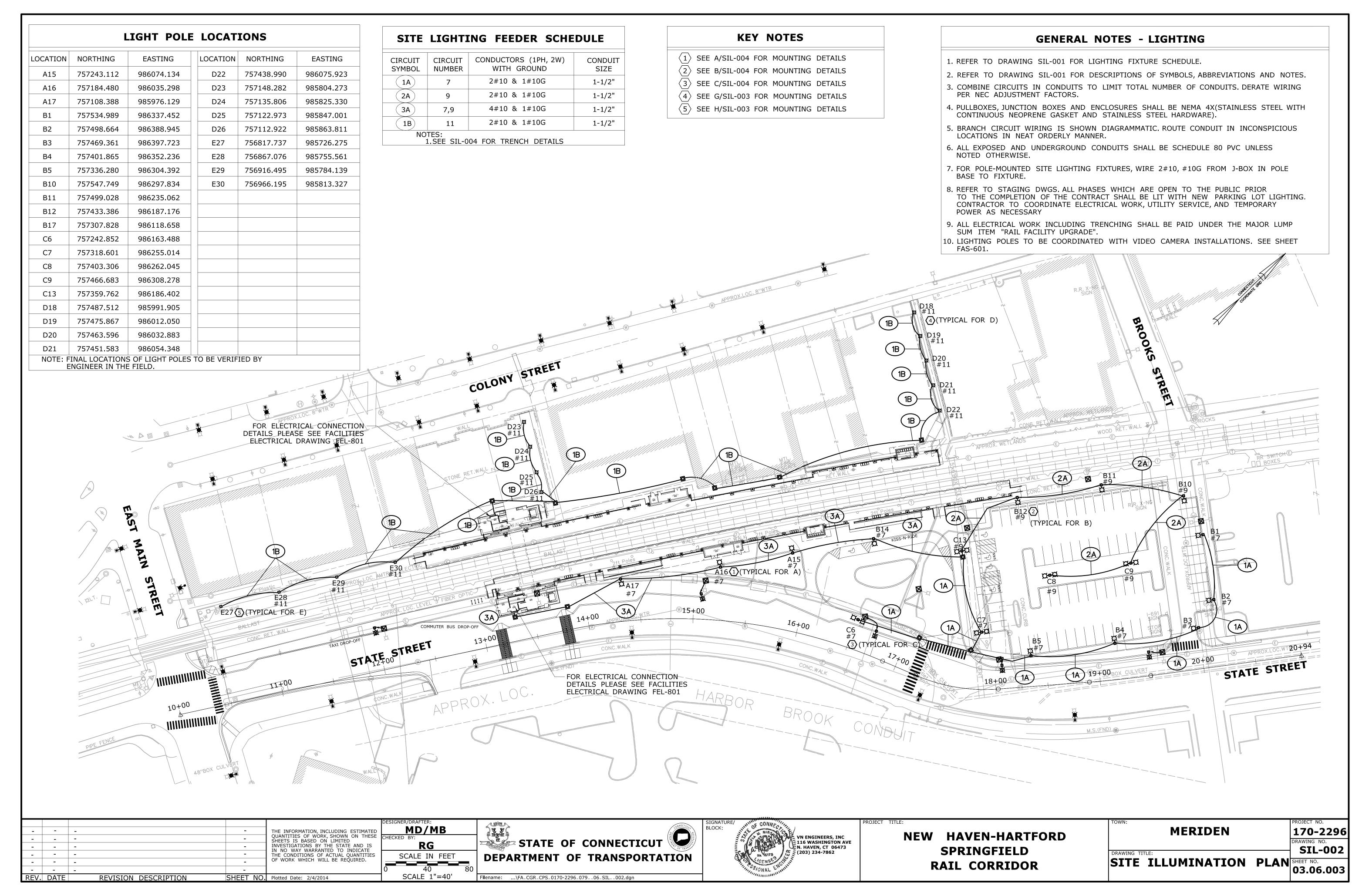
MERIDEN

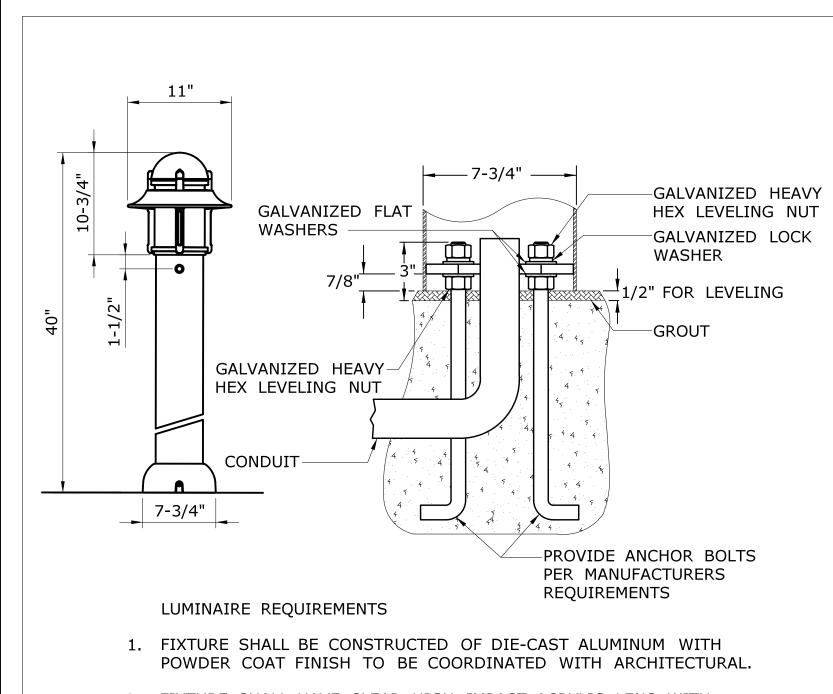
170-3155 **SIL-001**

03.06.002

ILLUMINATION NOTES

REV. DATE



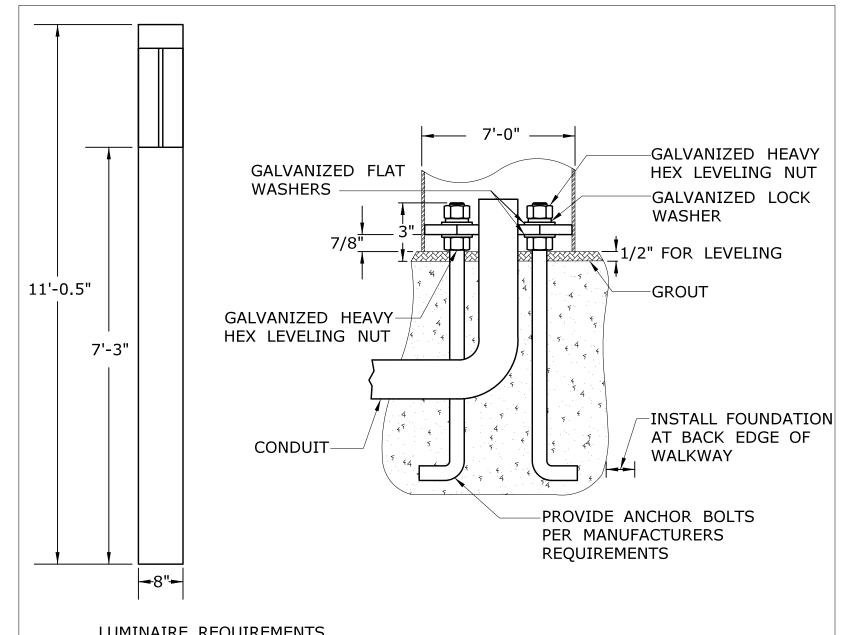


- 2. FIXTURE SHALL HAVE CLEAR HIGH IMPACT ACRYLIC LENS WITH DIE-CAST LOUVERS.
- 3. FIXTURE SHALL HAVE A HIGH POWER FACTOR (≥ .98) BALLAST WITH COLD WEATHER OPERATION AT TEMPERATURES DOWN TO ZERO DEGREE FAHRENHEIT.
- 4. FIXTURE SHALL BE UL LISTED FOR WET LOCATIONS.
- 5. PROVIDE FIXTURES WITH INTEGRAL BATTERY BACKUP WHERE INDICATED.

DETAIL BASED ON LUMEC DOSB1 SERIES OR APPROVED EQUAL

TYPE	LAMP #	LAMP TYPE	INPUT WATTS	VOLTS	MOUNTING
D	1	30W LED	30	277	SURFACE, GROUND





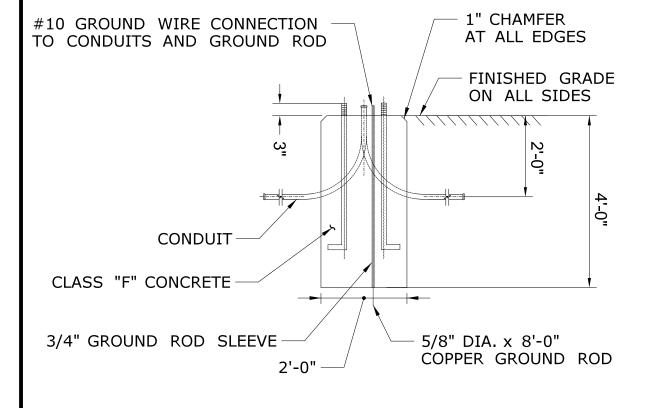
LUMINAIRE REQUIREMENTS

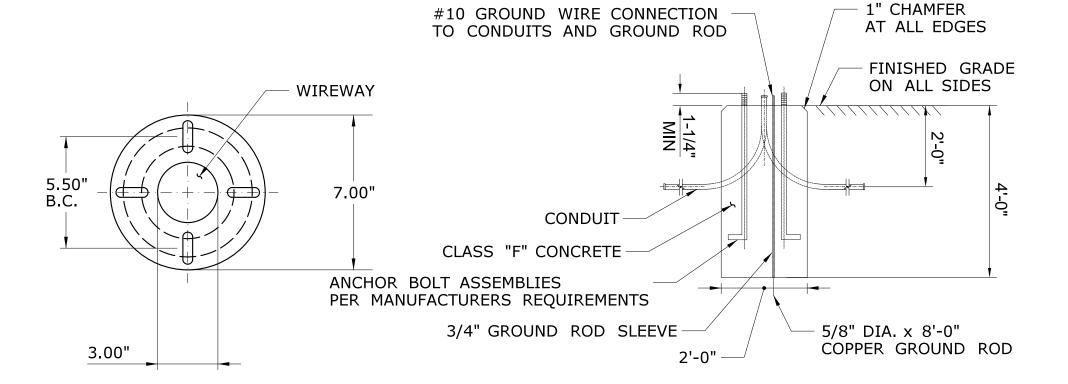
- 1. FIXTURE SHALL BE CONSTRUCTED OF DIE-CAST ALUMINUM WITH POWDER COAT FINISH TO BE COORDINATED WITH ARCHITECTURAL.
- 2. FIXTURE SHALL BE A NEMA TYPE 5 DISTRIBUTION.
- 3. FIXTURE SHALL HAVE A HIGH POWER FACTOR (> .90) BALLAST.
- 4. FIXTURE SHALL BE UL LISTED FOR WET LOCATIONS.
- 5. FIXTURE SHALL HAVE 180 DEGREE SHIELD TRACKSIDE TO LIMIT GLARE TO TRAINS.

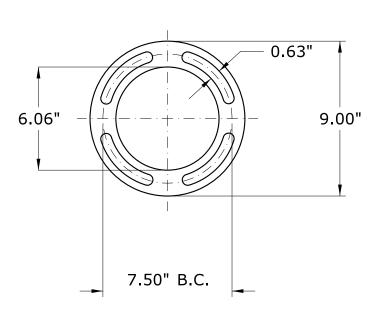
DETAIL BASED ON FORMS AND SURFACES LIGHT COLUMN PEDESTRIAN SERIES 600 OR APPROVED EQUAL

TYPE	LAMP #	LAMP TYPE	INPUT WATTS	VOLTS	MOUNTING
Е	4	28W LED	112	120/277	SURFACE, GROUND

EXTERIOR LIGHT COLUMN \ I-100







EXTERIOR BOLLARD FOUNDATION

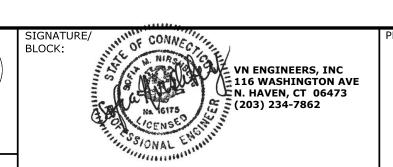
EXTERIOR BOLLARD BOLT CIRCLE

EXTERIOR LIGHT COLUMN FOUNDATION

EXTERIOR LIGHT COLUMN BOLT CIRCLE

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SIGNER/DRAFTER: MD/MB	CONNECTICAL
ECKED BY: RG	STATE OF CONNECTICUT
NOT TO SCALE	DEPARTMENT OF TRANSPORTATION
	Filename: FA_CON_PDM_0170-2296_00704_CIV_STAGE_PLN-001.dgn



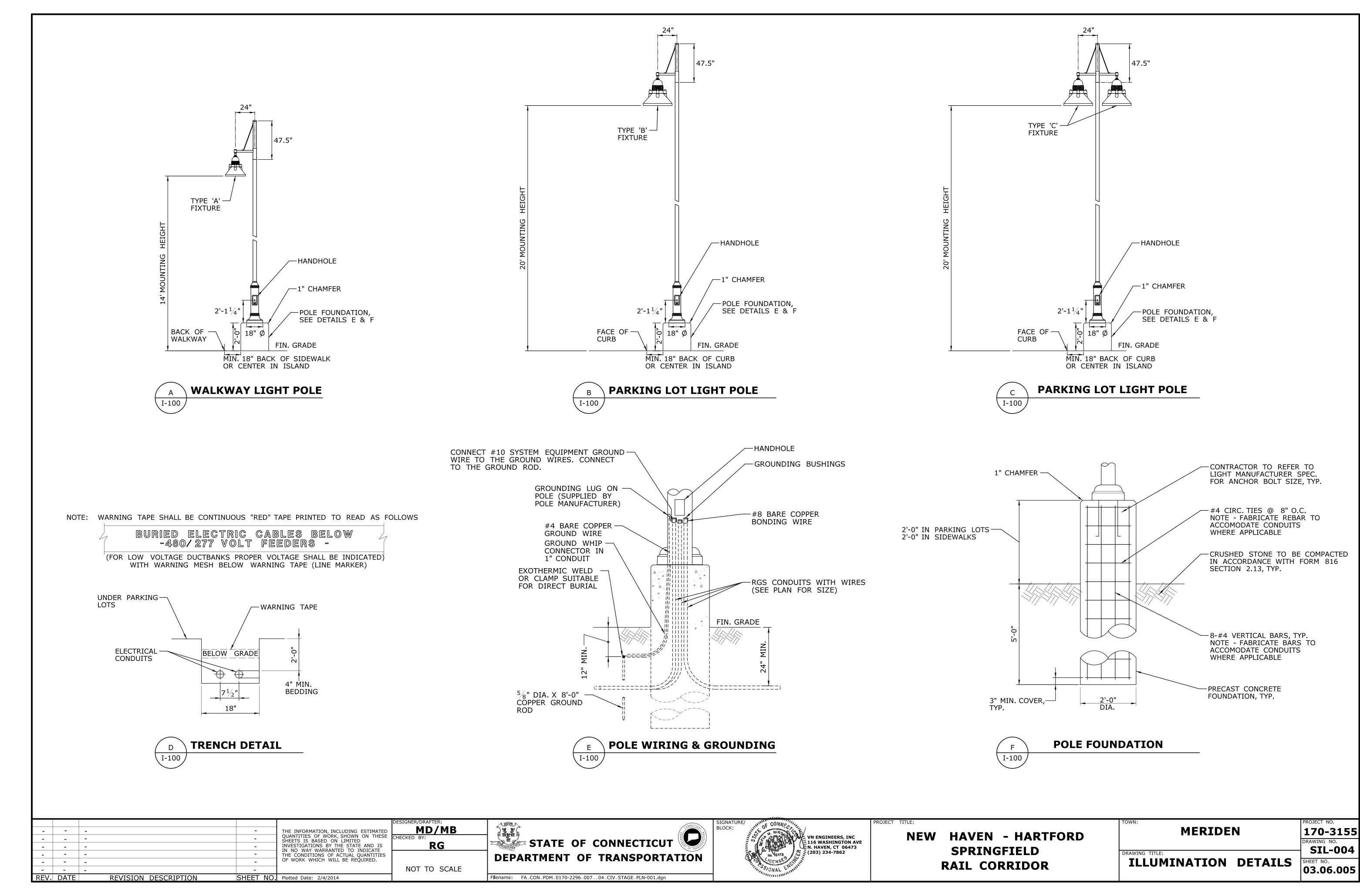
HAVEN - HARTFORD SPRINGFIELD RAIL CORRIDOR

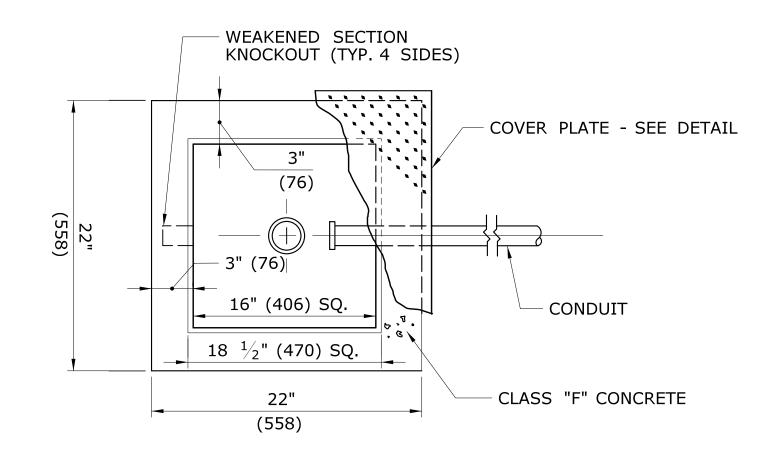
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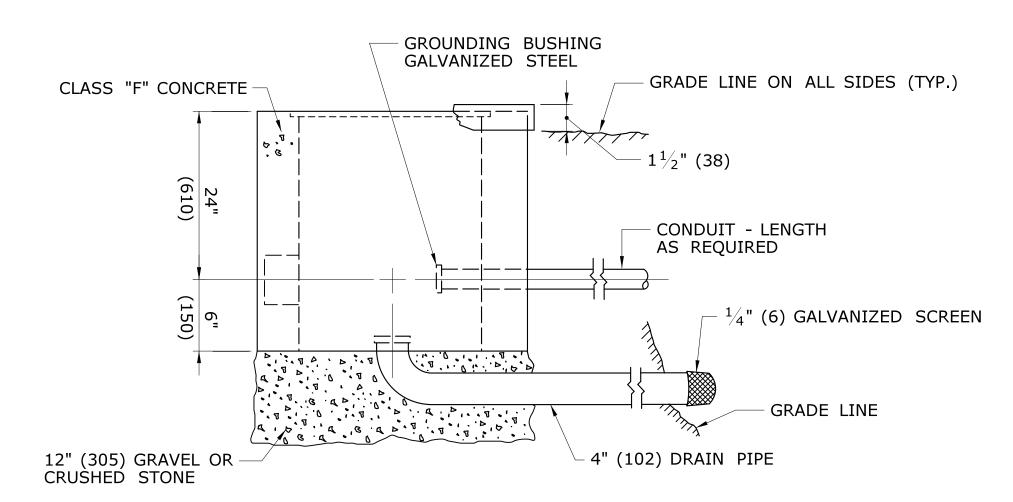
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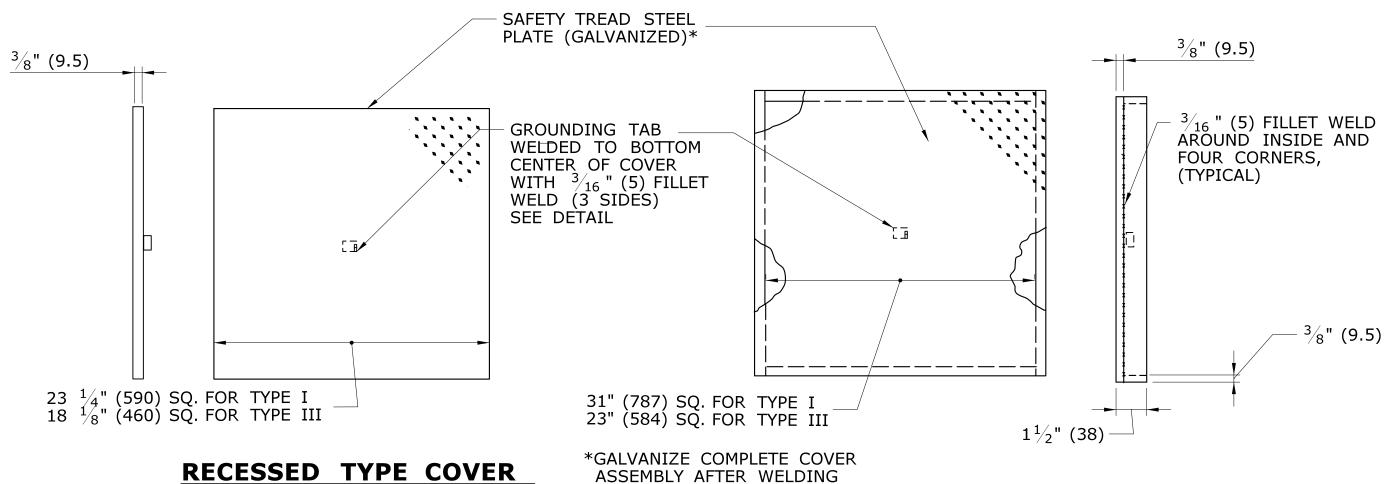
ILLUMINATION DETAILS 03.06.004







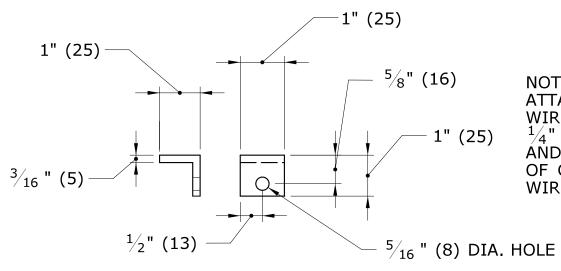
CONCRETE HANDHOLE - TYPE III



RECESSED TYPE COVER

RECESSED COVER TO BE USED IN MEDIAN, IN PAVEMENT, IN SIDEWALK, OR WHERE INDICATED ON PLANS.

OVERLAP TYPE COVER



NOTE: ATTACH 72" (1830) LENGTH OF NO. 8 GROUND WIRE TO GROUNDING TAB WITH ONE HOLE LUG, 1 /₄" (M6) x 3 /₄" (20) LG. SST HEX HEAD BOLT, AND SST FLAT WASHER. ATTACH FREE END OF GROUND WIRE TO NO. 8 BARE GROUND WIRE IN HANDHOLE.

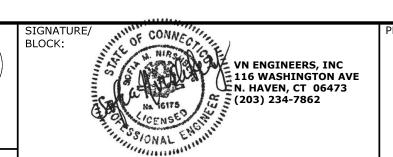
STEEL GROUNDING TAB

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MD/MB SCALE AS NOTED

STATE OF CONNECTICUT **DEPARTMENT OF TRANSPORTATION**

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NEW HAVEN - HARTFORD SPRINGFIELD RAIL CORRIDOR

MERIDEN

170-3155 **SIL-005**

ILLUMINATION DETAILS SHEET NO. **03.06.006**